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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/892,051	06/26/2001	Volker Mauer	ALT.P003	1778
27296	7590	10/29/2004	EXAMINER	
LAWRENCE M. CHO			CHANG, EDITH M	
P.O. BOX 2144			ART UNIT	
CHAMPAIGN, IL 61825			PAPER NUMBER	
			2637	

DATE MAILED: 10/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<p align="center"><b>Office Action Summary</b></p>	<p>Application No.</p> <p align="center">09/892,051</p>	<p>Applicant(s)</p> <p align="center">MAUER, VOLKER</p>	
	<p>Examiner</p> <p align="center">Edith M Chang</p>	<p>Art Unit</p> <p align="center">2637</p>	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 16 June 2001.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 2,4 and 9-24 is/are rejected.
- 7) ☒ Claim(s) 1,3 and 5-8 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 June 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

***DETAILED ACTION***

***Claim Objections***

1. Claims 1-8 and 15-20 are objected to because of the following informalities:

Claim 1, line 9: "a first sequence" is suggested changing to "the first set"; and line 11: "a second sequence" is suggested changing to "the second set".

Claim 7, line 1: "generating" is suggested changing to "to determine", "from a" is suggested changing to "from the"; line 2: "from a" is suggested changing to "from the", and "during a" is suggested changing to "during the".

Claim 15, line 1: "determining" is suggested changing to "generating".

Claim 16, lines 5 & 7, claim 20, line 2: "sets of sample values" is suggested changing to "sample sequences".

Claims 2-6, 8, 17-20 are directly or indirectly depend on objected claims 1 and 16.

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 2, 4, 9-15 and 21-24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 2, line 3: "determining fourth first partial accumulation results during a fourth time

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step” is not understood that at the first time step determining first partial accumulation results, the second time step determining second and third partial accumulation results, what is the connection of the fourth time step to the first and second time steps by skipping the third time step.

Claim 4, line 2: “a lag result” does not clearly indicate is that the “a lag result” from the lag results for the first and second sample values or a new lag result.

Claim 9, line 10: “a first sample sequence” does not clearly indicate that what is the connection/relation of the “a first sample sequence” with the first set of n sample values and the second set of n sample values which determine the partial accumulation results.

Claim 21, line 4: “one set of sample values of a plurality of sets of sample values” stored in the plurality of n sample sequence registers does not clearly indicate what is the connection of it with “sample values from a plurality of sample sequences” stored in the plurality of n sample sequence registers cited in lines 2-3.

Claims 10-15 and 22-24 are directly or indirectly depend on rejected claims 9 and 21.

### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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5. Claims 16-21 are rejected under 35 U.S.C. 102(b) as being anticipated by Schmitt (US 3,604,911).

Regarding **claims 16 & 18-19**, in Fig. 1 Schmitt discloses sets of contiguous sample values in the received pattern shift register (element 30 of Fig. 2) of each M-bit segment comparator and sets of contiguous coefficients in the reference pattern shift register (element 32 of Fig. 2) of each M-bit segment comparator. In each/different recirculate time of Fig. 3 (d), each sample value in the received pattern shift register is exclusive OR (modulo 2 adder) with corresponding coefficient (Fig. 3).

Regarding **claim 17**, in Fig. 1, Schmitt discloses the correlation results generated from output line 14 (or bus 16) of each segment comparator to the detector element 18.

Regarding **claim 20**, in Fig. 3 (d), the second recirculate time is after the first load time, in this load time period the received sample sequence of segment comparator  $10_i$  shifted to segment comparator  $10_{i+1}$  (column 5 lines 40-46) or both the received sample sequence and code sequence of segment comparator  $10_i$  shifted to segment comparator  $10_{i+1}$  (column 5 lines 56-62), hence comprising generating partial accumulation results.

Regarding **claim 21**, in Fig. 1 & Fig. 3, Schmitt discloses a correlator comprising M stage received pattern shift registers 30 (in elements  $10_1$  &  $10_3$ ) storing n sample values processed in parallel, M stage reference pattern shift registers 32 (in elements  $10_1$  to  $10_4$ ) store up to 2n coefficients of code sequence; and elements 48, 50 and 52 in each segment comparator processing the sample values in each register 30 with corresponding coefficients in registers 32 during different recirculate time as indicated in Fig. 3.

***Allowable Subject Matter***

6. Claims 1, 3 and 5-8 would be allowable if rewritten to overcome the objections listed in the paragraph 1 of this Office action.

7. Claims 2, 4 and 9-15 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

8. Claims 22-24 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. The following is a statement of reasons for the indication of allowable subject matter:

The prior art of record does not teach or suggest, alone or in a combination, among other things, at least a correlator unit and it method of managing the code sequence as a whole, the combination of elements and features as claimed, which includes processing the second sample values with the first and second code sequences to determine third partial accumulation results during the second time step; and generating a correlating result for the second sample values in response the first and third partial accumulation results.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Edith M Chang whose telephone number is 571-272-3041. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jayanti Patel can be reached on 571-272-2988. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Edith Chang  
October 25, 2004

  
YOUNG T. TSE  
PRIMARY EXAMINER